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THE INSECT PEST SURVEY
BULLETIN

APR 12 1929

A periodical review of entomological conditions throughout the United States
issued on the first of each month from March to December, inclusive.

Volume 9

April 1, 1929

Number 2

BUREAU OF ENTOMOLOGY
UNITED STATES
DEPARTMENT OF AGRICULTURE
AND
THE STATE ENTOMOLOGICAL
AGENCIES COOPERATING

INSECT PEST SURVEY BULLETIN

Vol. 9

April 1, 1929

No. 2

OUTSTANDING ENTOMOLOGICAL FEATURES IN THE UNITED STATES FOR MARCH, 1929

In this number of the bulletin is a general review of the Hessian-fly situation as it appeared to the investigators of the Bureau of Entomology and the State collaborators during the fall and winter months. In general, throughout the Middle Atlantic States and the northern part of the East Central States the Hessian fly was not unusually abundant. In the southern part of the East Central States extending southward over western Kentucky and Tennessee this insect was more plentiful. The situation west of the Mississippi Valley is greatly improved over that of last year with the exception of central and southeastern Kansas and southwestern, east central, and northeastern Missouri.

Up to the present time there are no indications from any part of the country that the chinch bug is abnormally abundant.

Reports from Connecticut indicate that the apple aphid (Aphis pomi DeG.) is likely to be unusually abundant in that State. Similar conditions occur in parts of Missouri.

The California red scale has been found heavily infesting willow and nightshade in ravines adjacent to citrus groves in California. These infestations are undoubtedly responsible for the difficulty in cleaning up infestations adjoining these ravines.

Recent recoveries of Coccophagus sp. indicate that this parasite of the citrophilus mealybug is able to maintain itself under the winter conditions of southern California.

A tortricid moth (Amorbia sp.), probably a new species, has recently been reared from material from La Habra Heights, Calif. This insect seriously disfigures the fruit of avocado by its galleries.

The vegetable weevil is reported as causing very serious damage from many parts of Mississippi.

The onion thrips is seriously affecting several hundred acres of onions in the Laredo district of Texas. It appears that in this district broccoli acts as an alternate host plant for this thrips.

In the Chadbourn district of North Carolina, slugs are reported as doing considerable damage to tobacco in seed beds. This condition has not been observed heretofore.

A new host, Thea sinensis, for the citrus whitefly is reported by the Los Angeles County Horticultural Commission.

In this number of the bulletin is a series of records made on the abundance of the common cattle grub throughout the Middle Atlantic, East Central, and Mississippi Valley States, and westward to Oklahoma and Texas.

GENERAL FEEDERS

WIREWORMS (Elateridae)

Missouri

L. Haseman (March 25): From limited observations, wireworms in sod land seem less abundant at this time than usual. A few of the adult beetles have recently been observed moving about above ground.

WHITE GRUBS (Phyllophaga spp.)

Missouri

L. Haseman (March 25): As yet no emergence and no flight of the beetles have occurred but they are present in goodly numbers in the sod land just beneath the surface of the soil. The larvae are also present in the surface soil as shown by recent diggings.

CEREAL AND FORAGE-CROP INSECTS

WHEAT

HESSIAN FLY (Phytophaga destructor Say)

General
Statement

C. C. Hill (January, 1929): In general, throughout the States of Pennsylvania, Maryland, Delaware, the panhandle district of West Virginia, Virginia, and North Carolina the Hessian-fly infestation was considerably less than in 1927, and with the exception of certain districts of Pennsylvania is not sufficient to cause serious alarm to wheat growers. From previous experiences however, sufficient fly is present throughout most of the area under observation to merit observance of recommended dates of sowing to avoid fly injury. The most heavy infestations were found in the central wheat-growing districts of Pennsylvania and here damage to the coming crop will be unavoidable.

C. M. Packard (January, 1929): In southern Michigan, and in the northern and central portions of Ohio and Indiana the Hessian fly was not sufficiently abundant in the fall-sown wheat to cause injury, though it was universally present. Occasional early-sown fields containing considerable infestation were noted in Branch and Calhoun Counties in southern Michigan, in Fulton County in northwestern Ohio, and in several counties of northeastern Ohio, but on the whole infestation was very light. In the southern portions of Ohio, Indiana, and Illinois, however, the Hessian fly was more abundant last fall, many of the earlier sown fields being very heavily infested. Rather high infestations occurred also in some localities of western Kentucky and western Tennessee.

J. R. Horton (November, 1928): In general the Hessian-fly situation west of the Mississippi River has greatly improved since last summer, although there are sections in which a dangerously high percentage of the wheat is infested. The fly has decreased in the western two-thirds and the northern third of Kansas; but

has increased slightly in the central and southeastern portions. It is on the increase in almost all parts of Missouri, with the exception of the central western portions; and dangerous infestations occur in the east, central, and southwestern portions. In Oklahoma the fly is not abundant and high infestations occur only in the northeastern portion of the State. In Nebraska there is some infestation in southeastern counties, but on the whole nothing to cause alarm. Should weather conditions be favorable to the fly next spring (1929) serious outbreaks are in prospect in some localities in southeastern Kansas, and northeastern Oklahoma, and southwestern and east-central Missouri.

Missouri

L. Haseman (March 25): As reported last year, there is evidence that the Hessian fly in Missouri is on the increase and where wheat was seeded early last fall some fields were seriously damaged and we are expecting trouble from the Hessian fly this year; in east-central and northeastern Missouri the fly is serious.

CHINCH BUG (Blissus leucopterus Say)

Missouri

L. Haseman (March 25): There is nothing to report on the chinch bug, but judging by its scarcity throughout the State last fall we are not expecting it to be serious this year.

GREEN BUG (Toxoptera graminum Rond.)

Georgia

M. G. Yeomans (March 7): This insect has been found in the following counties: Irwin, Tift, Charlton, Brooks, Wilcox, Richmond, and Johnson, on oats and wheat.

F R U I T I N S E C T S

APPLE

APPLE APHID (Aphis pomi DeG.)

Connecticut

Philip Garman (March 25): Aphid eggs are unusually abundant in many orchards in New Haven County. Those hatched so far appear to be Aphis pomi DeG. Eggs are more abundant than last year.

Missouri

K. C. Sullivan (March 25): In some districts large numbers of eggs are present on apple trees. First hatching observed on March 24 and 25. There is a possibility of some serious injury this spring.

CODLING MOTH (Carpocapsa pomonella L.)

Missouri

L. Haseman (March 25): With the favorable control achieved last year in the northern half of the State we are not expecting an unusually serious infestation this year. However, in the

Ozark district of the State the codling-moth situation continues serious following unsatisfactory control last year. There is comparatively little winter mortality, as shown by recent collections of overwintering worms.

EUROPEAN RED MITE (Paratetranychus pilosus Can. & Fanz.)

Connecticut

Philip Garman (March 25): This mite is attacking apple in New Haven County, in the usual abundance. It is present in the egg stage in many orchards.

PEACH

PEACH BORER (Aegeria exitiosa Say)

Ohio

E. W. Mendenhall (March 25): At Dayton the peach trees for home planting to a large extent are affected with the peach borer. Many times through carelessness or ignorance. Only a few trees there could be easily taken care of.

ORIENTAL FRUIT MOTH (Laspeyresia molesta Busck)

Mississippi

R. W. Harned (February 28): Peach twigs showing injury that was probably caused by the oriental fruit moth were received on February 15 from Water Valley. The correspondent stated that his peach trees were seriously affected in this manner.

PLUM CURCULIO (Conotrachelus nenuphar Hbst.)

Georgia

O. I. Snapp (March 21): Adults were found on the trees today at Fort Valley. This does not represent the date of the appearance of the first beetles from hibernation. They probably started to leave hibernation about two weeks ago. We are expecting a heavy infestation on peach on account of the heavy population entering hibernation and the mild winter.

SPOTTED CUCUMBER BEETLE (Diabrotica duodecimpunctata Fab.)

Georgia

O. I. Snapp (March 7): Adults were first observed in the orchards today at Fort Valley. These insects begin to leave hibernation quarters at the same time as the plum curculio. The season is about two weeks earlier than 1928. (March 12): The infestation is heavy in some orchards and they are now damaging the peach blossoms (petals, calyces, and little peaches).

SAN JOSE SCALE (Aspidiotus perniciosus Say)

Georgia

O. I. Snapp (March 20): The San Jose scale infestation is not so heavy in the middle Georgia peach belt as usual.

Missouri

L. Haseman (March 25): The scale situation in Missouri is very favorable with no commercial orchard to my knowledge seriously infested.

PERSIMMON

PERSIMMON ROOT BORER (Sannina uroceriformis Walk.)

Mississippi

R. W. Harned (March 27): Borers that have been tentatively identified as Sannina uroceriformis were found boring into native persimmon at Biloxi on March 19.

PECAN

PECAN WEEVIL (Balaninus caryae Horn)

Mississippi

R. W. Harned (February 28): Ten out of 15 pecans received from a correspondent at Meridian on February 25 showed exit holes of the pecan weevil,

HICKORY SHUCK WORM (Laspeyresia caryana Fitch)

Mississippi

R. W. Harned (February 28): Twelve out of 15 pecans received from a correspondent at Meridian on February 25 showed injury by the pecan shuck worm.

AN APHID (Monellia sp.)

Georgia

T. L. Bissell (March 25): The first stem mother was found on March 25. Eggs were hatching in abundance March 26 at Experiment on pecan.

S U B T R O P I C A L F R U I T S

CITRUS

CALIFORNIA RED SCALE (Chrysomphalus aurantii Mask.)

California

Monthly News Letter, Los Angeles County Horticultural Commission, Vol. 11, No. 3, March 15: For the past several years citrus growers in the foothills region of the Mission District near San Fernando have had difficulty in cleaning up red-scale infestations in the parts of their groves adjoining the ravines. Recently red scale (Chrysomphalus aurantii) has been found heavily infesting willows and nightshade in the ravines, providing a means for reinfesting the citrus trees. Heretofore the willows have not been thought of as hosts of this scale.

H. C. Whitmore, County Horticultural Inspector, states that between 7 and 10 miles of willows fill the two main ravines and their several tributaries in the citrus area. There are approximately 300 acres affected which are almost entirely lemons with only about 20 acres of oranges in close proximity to the willows.

CITROPHILUS MEALYBUG (Pseudococcus gahani Green)

California

Monthly News Letter, Los Angeles County Horticultural Commission, Volume 11, No. 3, March 15: At the present writing, the mealybug is completing the spring generation. Adult mealybugs and egg masses are found in the fruit clusters with very few migrating to the trap bands on the trunks of the trees. It is the progeny of this generation which make up the peak spring infestation which would normally occur during late April, May, or June.

The Los Angeles County insectary has made preparation to have available during that period, starting April 1, a sufficient number of *Cryptolaemus* to establish in all infestations of any consequence.

As far as seasonal conditions are concerned there is no evidence that infestations will be particularly severe this year. However, there is sufficient mealybug present in the infested areas to permit, under particularly favorable conditions, an increase to a serious degree of infestation if not carefully watched.

One of the more important of the new *Citrophilus* mealybug parasites introduced into this country by Prof. Harry S. Smith has evidenced the ability to work under our winter temperatures. Mealybugs infesting trees on which this particular parasite, Coccophagus sp., has been liberated, have recently been collected from several localities and forwarded to Prof. Smith for dissection to determine the percentage of parasitism. Mealybugs from North Whittier Heights showed on examination 15 per cent parasitism, from East Whittier 41 per cent and from Santa Monica 50 per cent. These percentages are particularly interesting for the reason that the liberations were made in number and made late in the fall, proving that the parasite is capable of reproducing effectively during the winter months, in fact, dissections indicated that some of the eggs had been deposited in the mealybugs during the recent period of below freezing temperatures. H. M. Armitage states the status of the parasite as a whole had not, however, reached a point where it is possible to draw any conclusions as to its effectiveness. However, it can be said at this time that it cannot help but be an aid to the control of this serious pest of citrus trees, inasmuch as we have not previously had any internal parasite of this species occurring in California.

CITRUS WHITEFLY (Dialeurodes citri Ashm.)

Texas

T. C. Barber (March 20): I saw a considerable number of adults of the citrus whitefly on the first shoots of orange trees at Brownsville, no material damage done however. These are the first I have observed this year.

AVOCADO

A TORTRICID MOTH (Amorbia sp.)

California

Monthly News Letter, Los Angeles County Horticultural Commission,

Volume 11, No. 3, March 15: A tortricid moth was recently reared by Mr. L. E. Myers of the Los Angeles County Horticultural Commissioner's Office, from a larva found attacking avocado at La Habra Heights. The work of the larva consisted of making a large and unsightly burrow in the rind of the fruit. This is not the first record of its occurrence in California, as according to Mr. Busck it was first reported by Prof. E. O. Essig in 1922 on the same host and recently from San Diego also on avocado. In the latter place it seems to be more troublesome in attacking the leaves rather than the fruit. It has been suggested by Mr. Kieffer of the State Department of Agriculture that the species is native and possibly of more common occurrence in Mexico than in California.

TEA

CITRUS WHITEFLY (Dialeurodes citri Ashm.)

Georgia
and
California

Monthly News Letter, Los Angeles County Horticultural Commission, Volume 11, No. 3, March 15: Inspector Douglas, recently found living whitefly on Thea sinensis plants in a large shipment of nursery stock from the State of Georgia. Georgia is one of the States covered by quarantine for this pest. The discovery of the insects in this case is of added importance in that Thea sinensis heretofore has not been known to be a host of the whitefly. Another interception of whitefly material of unusual occurrence was made by Inspector Williams when he found Camellia plants of a more common variety in nursery stock brought down by automobile from the whitefly section near Sacramento. The inspection was made after a manifest was received by the County Horticultural Commissioner from the nursery where the plants were purchased. The material was destroyed.

TRUCK - CROP INSECTS

A MOLE-CRICKET (Scapteriscus acletus R. & H.)

Mississippi

R. W. Harned (February 28): Mole crickets identified by Mr. Caudell of the National Museum as Scapteriscus acletus were received on January 14 from Lyman. The correspondents wrote: "They plow close to the surface of the ground, eat the seed, and spoil the beds."

VEGETABLE WEEVIL (Listroderes obliquus Gyll.)

Mississippi

R. W. Harned (February 28): Complaints are received almost every day regarding the vegetable weevil. So far spinach, turnips, and cabbage are the only crops that have been seriously injured. During the past few days specimens have been received from Natchez, Tylertown, Summit, and Perkinston. (March 27): The vegetable weevil continues to cause much damage to plants

of various kinds throughout the southern half of the State. Truck growers at Crystal Springs in Copiah County reported them on March 20 as being very abundant and causing serious damage to carrots and tomatoes. Cabbages at Laurel were reported as being seriously injured on March 8, while severe damage to turnips was reported from Hattiesburg on March 12. A correspondent at Church Hill wrote on March 18 in regard to them as follows: "They have eaten my cabbage plants and are in the ground around the plants. They have eaten the leaves, buds, and all of the stem. Sometimes I find 8 or 10 around each plant." Serious damage to cabbage was reported by a correspondent at Goshen Springs on March 26.

HARLEQUIN BUG (Murgantia histrionica Hahn)

Mississippi

R. W. Harned (March 27): Specimens of the harlequin bug were received from Jackson March 26 with the report that they were seriously injuring turnips and mustard. Specimens were received from Greenwood on the same date with the report that young cabbage plants had been seriously injured by them.

J. P. Kislando (March 25): Murgantia histrionica was observed in large quantities feeding on cabbage at Wiggins.

STRAWBERRY

STRAWBERRY ROOT APHID (Aphis forbesi Weed)

Mississippi

R. W. Harned (March 27): Specimens of the strawberry root louse were collected on strawberries at Natchez on March 9, where they were reported as causing some injury. Serious damage to strawberries was reported as being caused at Tribbett on March 19.

PEAS

PEA APHID (Illinoia pisi Kalt.)

Florida

F. S. Chamberlin (March 26): Pea aphids are unusually abundant and severe damage has been sustained in many instances.

TOMATOES

COLORADO POTATO BEETLE (Leptinotarsa decemlineata Say)

Mississippi

J. P. Kislando (March 25): The first Colorado potato beetle for this season was observed on a tomato plant on March 25.

ONION

ONION THRIPS (Thrips tabaci L.

Texas

F. L. Thomas & S. W. Clark (March 7): Large areas in the

vicinity of Laredo are planted to onions. A severe infestation of the onion thrips has developed in one section, affecting several hundred acres. Lady beetles (Hippodamia convergens Guer.) were imported from Colorado by a large grower but were making no impression on the infestation. The source of the infestation was broccoli which had been planted abundantly in this particular district. Broccoli has recently been introduced into the south Texas vegetable cropping scheme and is a host plant of the onion thrips.

TURNIP

POPLAR LEAF STEM GALL (Pemphigus populi-transversus Riley)

Mississippi

R. W. Harned (February 28): Aphids that were very abundant on the roots of turnips at Perkinson on February 25 have been identified by A. L. Hamner as Pemphigus populi-transversus.

S O U T H E R N F I E L D- C R O P I N S E C T S

TOBACCO

TOBACCO FLEA BEETLE (Epitrix parvula Fab.)

Florida

F. S. Chamberlin (March 26): Flea beetles are unusually numerous on newly set tobacco plants in Gadsden County.

SLUGS (Mollusca)

North Carolina

J. N. Tenhet (March 20): Slugs are doing widespread damage to tobacco seed beds throughout the old South Carolina bright tobacco belt. Numerous beds in almost every community have been totally destroyed. In many communities the situation is serious. This pest has never been known to attack tobacco plant beds in this section (Chadbourn) before.

F O R E S T A N D S H A D E - T R E E I N S E C T S

BAGWORM (Thyridopteryx ephemeraeformis Haw.)

Ohio

E. W. Mendenhall (March 27): Bagworm winter cases are very abundant in Columbus and vicinity. They are found in nearly all kinds of shade trees and even on shrubbery. They are also found on cedar and other evergreen trees. They were also found abundantly at Circleville and in Springfield and Clark Counties.

EASTERN TENT CATERPILLAR (Malacosoma americana Fab.)

Mississippi

J. P. Kislanko (March 25): The first colony for this season of tent caterpillars, apparently Malacosoma americana, was observed on wild plum on March 25.

CANKER WORMS (Géometridae)

Kansas

R. L. Parker (March 18): The first female spring canker worm (Paleacrita vernata Peck) emerged at Manhattan on February 22. The first female fall canker worm (Alsophila pometaria Harris) emerged at Manhattan on February 22. There has been a slow increase of the emergence of the canker worms, with considerable fluctuation in the weather, especially temperature.

On March 14 we had our highest emergence so far this season - 131 female spring canker worms and 110 males of both species were taken from one elm tree. Other tree records have been going well over a hundred in counts for the spring canker worm females and also large numbers of males. The record of the males has not been segregated as to species. Records for the fall canker worms are now very few.

ARBORVITAE

AN APHID (Dilachnus thujaefolia Theob.)

Mississippi

R. W. Harned (March 27): Arborvitae plants throughout the State have been attacked recently by plant lice or aphids belonging to the species Dilachnus thujaefolia. Many complaints regarding these insects have been received.

BOXELDER

BOXELDER BUG (Leptocoris trivittatus Say)

Kansas

J. W. McColloch (March 14): The boxelder bug has proved a great nuisance in houses and stores at Mankato, Long Island, and Clyde.

CEDAR

DEODAR WEEVIL (Pissodes deodarae Hopk.)

Mississippi

R. W. Harned (March 27): The deodar weevil has been reported causing serious injury to Cedrus deodara at Picayune, Durant, and Meridian, during the past month.

HICKORY

A CURCULIO (Conotrachelus sp.)

Mississippi

J. P. Kislanko (March 25): A species of Conotrachelus was collected at Wiggins ovipositing and feeding on new growth of hickory. Some of the eggs were already hatched and the larvae were feeding on the inside of the petioles. Several minute apparently egg parasites were observed in the vicinity of weevil punctures and on the leaves. Additional observations will be made to note the extent of injury to hickory.

MAPLE

MAPLE BORER (Synanthedon acerni Clem.)

Ohio

E. W. Mendenhall (March 27): I find the maple trees in street planting, especially in Newark, and towns in Licking County, affected with the maple borer which is shortening the lives of the shade trees.

OAK

HORNED OAK GALL (Andricus cornigerus O.S.)

Mississippi

R. W. Harned (March 27): Galls tentatively identified as the horned oak gall, Andricus cornigerus, were collected recently at Pontotoc and Corinth. At each place oak trees were heavily infested. The species also occurs at a number of places throughout the State.

WILLOW

OAK KNOT GALL (Andricus punctatus Bass.)

Mississippi

R. W. Harned (March 27): Galls on willow and water oak trees at DeKalb were collected on February 2 and identified by E. P. Felt as the gouty oak gall caused by Andricus punctatus. The trees were quite heavily infested. This species occurs at a number of places throughout the State.

INSECTS ATTACKING GREENHOUSE
AND ORNAMENTAL PLANTS

CHRYSANTHEMUM

CHRYSANTHEMUM GALL MIDGE (Diarthronomyia hypogaea Loew)

Mississippi

R. W. Harned (February 28): Specimens of the chrysanthemum gall midge on chrysanthemums were collected on January 7 from the property of the Tupelo Floral Company, Tupelo.

CREPE MYRTLE

CREPE MYRTLE APHID (Myzocallis kahawaluokalani Kirk)

Georgia

T. L. Bissell (March 26): Eggs hatching abundantly on March 25 at Barnesville, and on March 26 at Griffin on crepe myrtle. The host plant shows no sign of activity.

FERNS

FERN SCALE (Hemichionaspis aspidistrae Sign.)

Ohio E. W. Mendenhall (March 26): The fern scale is quite abundant on Boston ferns in some of the greenhouses in Springfield.

SOFT SCALE (Coccus hesperidum L.)

Ohio E. W. Mendenhall (March 26): I find the soft brown scale on ferns in some of the greenhouses in Springfield.

HOLLYHOCK

GREEN PEACH APHID (Myzus persicae Sulz.)

Mississippi R. W. Harned (March 27): Aphids identified by A. L. Hamner as Myzus persicae Sulz. were quite abundant on hollyhocks at Vicksburg on March 6.

ROSE

POTATO APHID (Illinoia solanifolii Ashm.)

Mississippi R. W. Harned (March 27): Aphids that have been identified as Macrosiphum rosaefolium by A. L. Hamner were very abundant on roses at Yokena, on March 19, and at Okolona on March 25.

ROSE SCALE (Aulacaspis rosae Bouche)

Ohio E. W. Mendenhall (March 27): I find the rose scale is quite abundant in Dayton and vicinity on home plantings of roses, causing some damage.

WISTERIA

LOCUST TWIG BORER (Ecdytolopha insiticiana Zell.)

Mississippi R. W. Harned (March 27): Wisteria twigs showing injury similar to that caused by Ecdytolopha insiticiana were received from Corinth on March 18.

INSECTS ATTACKING MAN AND
DOMESTIC ANIMALS

MAN

HOUSE FLY (Musca domestica L.)

Missouri L. Haseman (March 25): The house fly has begun to appear in small numbers at Columbia.

CLUSTER FLY (Pollenia rudis Fab.)

New York F. C. Bishopp (February 23-27): Reports of household infestation of the cluster fly have come in from Ithaca and Pittsford. According to the statement received from the latter locality they are annoying on the second floor as well as in the attic on any warm day.

HORSE

NOSE BOTFLY (Gastrophilus haemorrhoidalis L.)

Illinois F. C. Bishopp and R. W. Wells (February 11): Nose flies are reported to be very annoying to horses in this locality (Urbana). Apparently they have been present for about 5 years.

CATTLE

COMMON CATTLE GRUB (Hypoderma lineatum DeVill.)

Pennsylvania H. S. Peters (February 16): At Pittsburg, four herds with a total of 207 cows showed an average of 0.35 grub per animal. No larvae in the fifth instar were found.

Ohio H. S. Peters (February 12): Fifty cattle at Columbus and 128 at Lancaster showed no infestation.

Indiana H. S. Peters (February 8): At Terre Haute, a total of 174 cattle (5 herds) showed an average of 1.5 grub per animal. One of these herds of 66 head was uninfested, while another herd of 27 cows had 163 grubs. Nearly all of the larvae were in the fourth and young fifth instars.

Illinois H. S. Peters (February 7): At Cairo 44 cows were examined and an average of 0.63 grubs found. At Effingham, 29 head had an average of 0.21 per animal. No mature larvae were found in either locality, the oldest being very young ones of the fifth instar.

F. C. Bishopp and R. W. Wells (February 10): Several herds of

cattle which were examined at Urbana showed no grubs in their backs. Apparently grubs are not numerous in native cattle in this locality. (February 11): Cattle in the vicinity of Peoria showed a moderate infestation of grubs in their backs, ranging from 0 to about 40. The oldest larvae observed were in the light brown fifth stage.

Minnesota

W. G. Bruce (February 12): Of 104 cattle examined in this locality (Mankato) none showed grubs in their backs.

Iowa

W. G. Bruce (February 11): Ninety-nine cattle examined were found to be free from grubs at Sioux City.

Nebraska

W. G. Bruce (February 10): Sixty-seven head of cattle were examined at Lincoln and showed an average of 1 grub each. All stages from third to mature, were present.

Kansas

W. G. Bruce (February 1 - 9): The average number of grubs per cow in several localities was as follows: Wellington, 50 head, 1.4; Hutchinson, 85 head, 1.; Clay Center, 21 head, 2.8; Manhattan, 97 head, 0.4. All larvae were extracted and all stages which occur in the back were found.

Tennessee

H. S. Peters (February 5): An average of 0.72 grub per head was found in 148 cattle examined at Memphis. Although some of the larvae were in the fourth stage most were nearing maturity.

Arkansas

H. S. Peters (February 4): An average of 1.64 grubs per head were found in 66 cattle examined at Hot Springs. All larvae extracted were nearly mature. Examined 119 cattle and found an average of 1.5 grubs per head at Little Rock. Some larvae were still in the fourth instar but most were in the light brown fifth stage.

Oklahoma

W. G. Bruce (February 1): An average infestation of 0.88 grub per head was found here (Oklahoma City) on 139 animals. All stages of larvae from thirds to mature fifth were present.

Texas

E. W. Laake (February 6): An examination of 48 head of cattle here (Houston) showed an average of 1.6 grubs per head. All larvae were extracted and only four specimens in the 4th instar were found.

BITING CATTLE LOUSE (Trichodectes scalaris Nitzsch)

Ohio

H. S. Peters (February 12): A moderate infestation was found at Lancaster on three young heifers.

POULTRY

FEATHER MITE (Liponyssus silvianus C. & F.)

Virginia

F. C. Bishopp (December 21, 1928): This mite was found to be established and causing considerable loss in a commercial poultry plant near here (Strassburg). Steps are being taken to eradicate the pest.

Ohio

C. R. Cutright (February 13): A commercial poultry plant here (Wooster) was found to be infested with this mite.

HOUSEHOLD AND STORE PRODUCT INSECTS

GREEN BOTTLE FLY (Lucilia caesar Meig.)

Missouri

L. Haseman (March 25): The unusual abundance of large green blowflies is on wing.

TERMITES (Reticulitermes spp.)

Kansas

J. W. McColloch (March 14): The first swarm of the year was noted on March 14, at Manhattan, following a spring rain. (March 20): Injury to woodwork in dwellings has been reported during the last month from Oak Hill, Vermillion, Lindsburg, McPherson, Minneapolis, and Olathe. Cherry and peach trees injured at Frederick.

Missouri

K. C. Sullivan (March 25): Termites (Reticulitermes sp.) in heated buildings at Columbia recently found to be swarming. This pest is becoming more serious every year and doing much damage to buildings.

Texas

F. L. Thomas (March 20): We have several persons who own homes in our town (Richmond, Ft. Bend County) and their homes are gradually being eaten up by white ants. These insects have gone so far as to eat through hardwood floors, and also the rugs on the floor. It is not known what extent of damage has already been done on these houses but more than likely it was much more than is realized by the owners.

ARGENTINE ANT (Iridomyrmex humilis Mayr)

Mississippi

R. W. Harned (March 27): The Argentine ant has been found at two places, Duckhill and Dossville, during 1929. This species had not been reported heretofore from these localities.

YELLOW ANT (Lasius interjectus Mayr)

Kansas

J. W. McColloch (March 21): This household ant was observed from around the foundations of houses at Manhattan today. This is the first swarming of the year.

POWDER POST BEETLES (Lyctus spp.)

Georgia

O. I. Snapp and H. W. Swingle (March 20): Many handles (fork, shovel, etc.) were ruined in a local hardware store by a very heavy infestation of powder-post beetles. The damage was such that the handles would break with very little force.

Kansas

J. W. McColloch ; Oak flooring in a house at Herington has been damaged by these beetles.

SEED CORN BEETLE (Agonoderus pallipes Fab.)

Kansas

J. W. McColloch (March 21): A heavy flight of these beetles occurred in the vicinity of Manhattan today.

CIGARETTE BEETLE (Lasioderma serricorne Fab.)

Kansas

J. W. McColloch (March 5): An infestation in upholstered furniture in a house at Kansas City was found on March 5.

